بسم الله الرحمن الرحيم

عنوان المحاضرة: Abnormal Uterine Bleeding

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-It's the most common gynecological complaint

Normal Menstruation:

-Duration of the flow = 2 – 7 days, Average = 4 days, Any abnormality → Uterine cause

-Cycle length = 3 – 5 wks, Average = 4 wks, Any abnormality → Ovarian cause

-Average Amount = 60 mL, upper limit of normal = 80 mL

-Menstrual blood doesn't Clot (defibrinated), Passage of clots = ↑amount

-Menstrual Blood composition: (50 – 65)%→ Blood + Endometrial shreds + Cervical mucus + Vaginal cells

-Menstrual Blood is combination of Arterial & Venous blood

- Thickness reduces from 8 ml to 2 ml (Only $^{1}/_{4}$ of the Endometrial thickness is shredded while rest of reduction is due to subsiding of the edema)

-Bleeding Stop due to: 1-Vasoconstriction 2-Platelet plug formation 3-Clotting
4-Endometrial regeneration under effect of estrogen of the next cycle)

Classification

Etiological
- **Organic**
  - **Histological**: -Ovular -Anovular
- **Dysfunction**
  - **Clinical**: -Cyclic -Acyclic
  - **Dewhurst**: -Primary -Secondary -Iatrogenic

Age
- ▪Infancy (d.t. estrogen withdraw.)
- ▪Pre-Pubertal
- ▪Childbearing
- ▪Peri-menopausal
- ▪Post-menopausal

Presentation
- -Menorrhagia
- -Polymenorrhea
- -Polymenorrhagia
- -Metrorrhagia
- -Metropathia Hemorrhagica
- -Perimenopausal
- -Postmenopausal

Menorrhagia:

Definition: Cyclic uterine bleeding that is excessive (>80 mL) and/or prolonged in duration (>7days)

Causes:

A) General: 1-Hemorrhagic blood disease (e.g. Thrombocytopenia) *Anticoagulants & Hypertension don't
2-Liver disease 3-Early cases of Hypo/Hyperthyroidism
4-Psychological Upset (Autonomic → ↑uterus blood supply → Congestion → Myometrial & Endometrial hypertrophy (Pelvic Sympathetic Syndrome)

B) Local:

1-↑Bleeding surface area: -Congenital (e.g bicornuate uterus) -Fibroid -Adenomyosis

2-Pelvic congestion:
- -Simple (e.g. Constipation) -Chronic (e.g. Pelvic Inflammatory Disease PID)
- -Abonormal Position (e.g.Prolapse, Rectovaginal fistula) -Endometriosis
- -Pelvis Tumor (e.g. Fibriod, Ovarian Cyst) -Extra-genital (e.g. Acute appendicitis)

3-Dysfunction:
- *-Primary:* -Failure of Vasoconstriction (↑PGE2, Prostacycline) -Failure of thrombotic plug formation -↑Fibrolytic Activity -Delayed endometrial regeneration
- *-Secondary:* -Blood disease - Early cases of Hypo/Hyperthyroidism
- *-Iatrogenic:* -IUD (↑Fibrolytic Activity, ↓Endometrial regeneration) -Steroid contraception

Polymenorrhea: (Epimenorrhea)

Definition: Cyclic bleeding occurs at too frequent interval (< 3 w)

Causes:

1-Constitutional (70%) 2-Organic: -Endometriosis -Pelvic Congestion

3-Dysfunction:

- *-Primary:* *Acceleration of follicular phase: -1st menstruation after marriage, delivery, abortion -Following menarche -Preceding menopause
- *-Secondary:* -Hypothyroidism

Metrorrhagia:

Definition: Irregular vaginal bleeding unrelated to menstruation

Causes:

1-Local: -Inflammatory -Neoplastic

2-General: -Psychic upset -Liver disease

3-Pregnancy Complication: (e.g. Abortion, Ectopic, Vesicular mole)

4-Dysfunction:

- *-Primary:* Metropathia hemorrhagica – Threshold bleeding (Low estrogen level)
- *-Secondary:* Blood disease *-Iatrogenic:* Drug induced

Metropathia Hemorrhagica: (EXAM Q)

Definition: Clinical situation characterized by episodes of amenorrhea (8 – 10 wks) followed by episodes of long and/or heavy uterine bleeding

Etiology: Unknown,

Theory: Disturbance of hypothalamic pituitary ovarian axis → Graafian follicle fails to rupture → cyst → ↑estrogen →
- Local: Endometrial hyperplasia & amenorrhea
- Central: ↓FSH → Late rupture of the follicle

Pathology:

Macroscopic: Uterus: Symmetrically enlarged, Soft, myometrial & endometrial hypertrophy
Ovaries: Enlarged, Cystic (uni or bilateral)

Microscopic: Endometrial hyperplasia, follicular cyst (in ovaries) & no corpus luteum

Diagnosis:

1-Age incidence: Extremes of reproductive life (shortly after menarche, near menopause)

2-Symptoms: short period of amenorrhea, followed by prolonged heavy painless bleeding

3-Size: Uterus: Symmetrically enlarged, soft Ovaries: uni or bi enlarged & cystic

4-Investigations: -U/S: Enlarged uterus with thick myometrium & endometrium + Cystic ovaries
-Fractional curettage -Hysteroscopy & directed biopsy